Driving Innovation in Housing Technology

January 23, 2013

Mr. Helder Gil, Legislative Affairs Specialist
Department of Consumer and Regulatory Affairs
1100 Fourth Street, SW, Room 5164
Washington, DC 20024
via e-mail ConstructionCodes@dc.gov

SUBJECT: December 7, 2012 proposed rulemaking by the Department of Consumer and Regulatory Affairs and the Construction Codes Coordinating Board to adopt new Construction Codes

Dear Mr. Gil:

On behalf of the NAHB Research Center, I write to propose that compliance with the ICC 700 National Green Building Standard (NGBS) be considered as an alternative compliance path to compliance with the new District of Columbia Construction Codes proposed on December 7, 2012. This recommendation is consistent with the International green Construction Code (IgCC) as adopted by the International Code Council (ICC). However, the NGBS alternative compliance path option was deleted, perhaps inadvertently, when the Department of Consumer and Regulatory Affairs proposed adopting the IgCC without Chapter 1: Scope and Administration.

Specifically, I refer to the following sections of the proposed rulemaking:

> ***101.4.9 D.C. Green Construction Code****. The D.C. Green Construction Code (2013), hereinafter referred to as the "Green Construction Code," shall consist of the 2012 edition of the International Green Construction Code ("International Green Construction Code"), as amended by the Construction Codes Supplement (12 DCMR K, Green Construction Code Supplement).*
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> > ***101.4.9.2 Administration and Enforcement****. Chapter 1 of the International Green Construction Code is deleted in its entirety. In its place, the provisions of 12 DCMR A, Chapter 1, shall apply to the Green Construction Code and are incorporated by this reference.*

Chapter 1 of the IgCC specifically deems residential buildings and the residential portions of mixed-use buildings that are in compliance with the ICC 700 NGBS to comply with the IgCC. Specifically, that section states:

> ***Section 101.3.1 Residential Construction****. In lieu of the requirements of this code, the following shall be deemed-to-comply with this code:*
> 1. *Group R-2 and R-4 residential buildings five stories or more in height above grade plane, their accessory structures, and the site or lot upon which these buildings are located that*

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comply with ICC-700, with a minimum energy efficiency category requirements of the Silver level performance level or equivalent.

2. *Group R-2 and R-4 portions of mixed use buildings that comply with ICC 700, with a minimum energy efficiency category requirements of the Silver performance level or equivalent. The remained of the building and the site upon which the building is located shall comply with the provisions of this code.*

The inclusion of the ICC 700 NGBS as an alternative compliance path within the International green Construction Code was an important recognition of the NGBS being one of ICC's I-codes, as well as an acknowledgement by ICC that since ANSI's initial approval of the NGBS in January 2009, it has become the most widely-used green building ANSI standard for residential construction. To date, the ICC 700 NGBS is recognized by many local and state jurisdictions in their regulatory and legislative initiatives to promote green residential buildings, and also cited by a few jurisdictions that have mandated ICC 700 as a green building code.

Please note that IgCC references *"minimum energy efficiency category requirements of the Silver performance level"* for compliance. ICC requires the Silver energy efficiency level because, at the time of the IgCC's publication, only the 2008 NGBS version was available. The 2012 NGBS was in development, but as a draft could not appropriately be cited within an I-Code. ANSI has subsequently approved the 2012 version of the NGBS and, as expected, the energy baseline for compliance was notably increased. Importantly, to be certified at the Bronze level (the lowest certification level) of the 2012 NGBS would require a building to be compliant with the 2012 IECC. Therefore, the energy efficiency requirements of the 2012 NGBS are perfectly aligned with the District's commitment to energy efficiency levels at the 2012 IECC levels. All certification levels above Bronze would yield buildings at increasing higher efficiency levels, a hallmark of the NGBS that most other green building rating systems do not share.

The NAHB Research Center recommends that the proposed Construction Code be amended in three specific ways. First, allow buildings designed and constructed in compliance with the ICC 700 NGBS to be an alternative compliance path within the scope of the code. Second, specifically recognize buildings certified as NGBS-compliant by the Research Center in **Section 101.4.9.4. Alternative Compliance Paths.** Third, include the ICC 700 NGBS in proposed Chapter 12 "Referenced Standards;" for this recommendation I specifically propose the language below in red:

> ***101.4.9.4.2 Projects Not Subject to the Green Building Act****. Where a project is not subject to the Green Building Act, but complies with the requirements of Sections 101.4.9.4.2.1, 101.4.9.4.2.2, ~~or~~ 101.4.9.4.2.3, or 101.4.9.4.2.4, the project shall be deemed to comply with the Green Construction Code.*
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> > *101.4.9.4.2.4 Compliance Utilizing the 2012 version of ICC 700 National Green Building Standard. Projects designed, constructed, and verified to be in compliance with the ICC 700-2012 National Green Building Standard listed in Chapter 12 of the Green Construction Code at the Bronze Level or higher shall be deemed to comply with the Green Construction Code. The owner shall have a 24-month period from the date of issuance of the first certificate of occupancy for the project to submit NGBS certification to the code official.*

I believe there are four compelling reasons that the District of Columbia should recognize the NGBS as an alternative compliance path. First, the International green Construction Code (IgCC) as adopted by ICC is intended to allow builders to select the NGBS as an alternative compliance path for residential buildings or the residential portions of mixed-use buildings. Second, the NGBS was specifically designed for residential projects and is affordable to implement making it ideally suited to help the District of Columbia achieve its goal of increasing the number of green residential buildings in a cost-effective manner. Third, the NGBS has been successfully used by residential buildings of all heights for over three years. As a result, it has a proven track record for being effective, rigorous, and affordable. Finally, as the only ANSI-approved residential green building rating system in the country, the District can be assured that the NGBS is a true consensus-based standard, developed by a balance of stakeholders, that has passed the scrutiny of extensive public review and comment.

Overview of the National Green Building Standard

The ICC 700 National Green Building Standard is the first and only residential green building rating system to undergo the full consensus process and receive approval from the American National Standards Institute (ANSI). The original 2008 version was approved by ANSI in January 2009. The 2012 version was approved by ANSI earlier this month. The 2012 NGBS builds upon the cumulative stakeholder experiences with the 2008 version, including perspectives on design, construction, certification, and operation of new and existing green single- and multifamily buildings and green land developments. In addition, the updates align the NGBS with building codes that have been adopted around the country since the initial version was approved by ANSI.

The National Green Building Standard carries two important designations. It is ANSI-approved as an American National Standard. It is also part of the family of ICC International-codes (I-Codes) that form a complete set of comprehensive, coordinated building safety and fire prevention codes.

ANSI accreditation of any standard is important because it ensures balance, representation, openness, consensus, and due process in the standard's development process. The original Consensus Committee that developed the 2008 NGBS was comprised of 42 individuals representing a variety of government agencies, municipalities, home building industry stakeholders, and non-profit organizations. For example, representatives from the U.S. Department of Energy and the U.S. Environmental Protection Agency were among the federal agencies represented. The U.S. Green Building Council was represented, and 10 state or local municipalities participated. Three members were builders. Many more industry and building science experts served on the various Task Groups that helped to shape the NGBS. Diverse representation of stakeholders ensures that the NGBS maintains a balance of stringency with regard to desired performance and practicability. Over 2,000 public comments were considered as part of the original NGBS development process. The second version had similarly impressive stakeholder participation and volume of public comments. In total, close to 100 industry leaders and experts helped to shape the 2012 version of the NGBS, and the Consensus Committee considered over 800 public comments and recommendations.

As one of the I-Codes, the NGBS is written in code language to make it easy for industry professionals and contractors to understand. I believe this is one reason the NGBS has been successful even in areas where it is not part of the building code and is used as an above-code program. For a residential building to be in compliance, the building must contain all mandatory practices in the NGBS. The building must also contain enough practices from each of the six categories of green building practices to meet the required threshold points (See page 12 in ICC 700-2008 NGBS). The six categories of green practices are:

- Lot & Site Development
- Resource Efficiency
- Energy Efficiency
- Water Efficiency
- Indoor Environmental Quality
- Homeowner Education

Under the NGBS, buildings can attain one of four potential certification levels: Bronze, Silver, Gold, or Emerald. The NGBS was specifically designed so that no one category of green practices was weighted as more important than another. Peerless among other green rating systems, the NGBS requires that all projects must achieve a minimum point threshold in every category of green building practice to be certified. A project certified to the NGBS can't merely obtain all or most of its points in a few categories, as other rating systems allow. This requirement makes the NGBS the most rigorous green building rating systems available at this time.

As an ANSI-approved standard, the NGBS is subject to regular reviews and periods of public comment. Development of the next version of the NGBS is expected to start within the next three years.

Certification Program
The NAHB Research Center serves as Adopting Entity and provides national certification services to the NGBS. The Research Center is a 49-year old, internationally-recognized, accredited product testing and certification laboratory located in Upper Marlboro, Maryland. Our work is solely focused on the residential construction industry and our mission is to improve the affordability, performance, and durability of housing. Our core competency is as an independent, third-party product testing and certification lab, making us uniquely suited to administer a green certification program for residential buildings.

The NAHB Research Center is an independent subsidiary of the National Association of Home Builders (NAHB); however, our operations are completely separate from NAHB. Our national accreditations as a third-party laboratory are demonstrable proof that our work is independent of outside influence and that NAHB has no operational control over our business. We have an independent and separate Board of Directors that oversees our management.

Two Mandatory Inspections
To be certified to the NGBS, every green project is subject to two independent, third-party verifications. There is no self-certification in our program. Builders must hire an independent, accredited verifier who is responsible for visual inspection of every green building practice in the home or dwelling unit. The verifier must perform a rough inspection before the drywall is installed in order to observe the wall cavities and a final inspection once the project is complete. The required verification imbues a high level of rigor and quality assurance to the program and to the projects that are certified.

The NAHB Research Center qualifies, trains, and accredits building professionals to provide independent verification services for builders. Verifiers must first demonstrate that they possess experience in residential construction and green building before they are qualified to take the verifier training. Many verifiers are HERS raters and/or LEED raters. Potential verifiers must complete thorough training on exactly how to verify every practice in the National Green Building Standard. After completing the training, verifiers must pass a written exam and demonstrate that they carry sufficient liability insurance before receiving Research Center accreditation. Verifiers must have their accreditation renewed yearly. They serve as our in-field agents to verify buildings are built in compliance with the NGBS.

The Research Center reviews every rough and final inspection to ensure national consistency and accuracy in the verification reports. Further, we regularly audit our verifiers and the verifications that they perform as part of our internal quality assurance program.

Credibility and Rigor
Several studies have been completed to demonstrate the affordability and/or rigor of the NGBS. *Green Home Building Rating Systems - A Sample Comparison* evaluates the costs and technical requirements of bringing two sample code-compliant production houses in different climate zones into compliance with the NGBS and LEED for Homes. AIA Cincinnati published a report comparing the NGBS and LEED for Homes that found the programs to be essentially equivalent in rigor, but the NGBS to be more affordable and easier to use. The Home Builders Association of Greater Chicago released an independently prepared report evaluating the additional costs required to elevate three sample code-compliant, urban, residential building types in the City of Chicago into compliance with the Chicago Green Homes Program (CGH), the NGBS, and LEED-H.

In addition to the reports referenced above, the Research Center recently prepared a one-page summary, *Multifamily Energy Performance Comparison*, to address the topic of energy efficiency equivalency that often arises in discussions about green rating systems. While there are many elements of performance in green rating systems, this comparison focuses on energy performance of multifamily new construction built to the NGBS and the LEED 2009 for New Construction and Major Renovation Rating System (LEED-NC). This summary shows that at the lowest levels of certification (Bronze for NGBS and Certified for LEED-NC), the energy efficiency requirements of the two rating systems are equivalent. However, at the higher levels, the NGBS is more rigorous than LEED-NC with regard to energy efficiency.

Legislative and Regulatory Parity with LEED
The NGBS was developed after the USGBC's LEED for Homes and Enterprise Green Communities rating systems, therefore, LEED and Green Communities are more commonly recognized in legislative and regulatory initiatives. However, since 2009 when ANSI first approved the NGBS we have found that without exception the NGBS has been considered as on par or more stringent than LEED as a green building rating system for residential projects. In New York State, for example, NYSERDA provides financial incentives for residential buildings certified to the Silver level of either the NGBS or LEED. Delaware State also provided financial incentives for homes built to the Silver level of either the NGBS or LEED. In New Mexico, homes certified to either the NGBS or LEED can qualify for the generous State tax credit program. To date, not a single jurisdiction has refused to recognize the NGBS as an alternative compliance path for any regulatory or incentive program where we have asked them to make an equivalency decision. For a more complete listing of where the Standard has been recognized, please visit our summary of incentives.

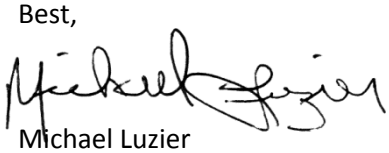
Program Statistics to Date
The Research Center has certified approximately 6,916 projects to date, including 483 multifamily buildings representing 9,753 dwelling units. Over the past year, multifamily buildings have represented the fastest growing segment of our certification program. We have over 18,000 apartments in-process for NGBS certification. I believe that this indicates how the NGBS can be effectively used by residential buildings to be more efficient and high performing.

Summary
The NGBS produces projects that reach exceptional levels of sustainable design and construction. With an over three-year proven track record of improving the performance of residential buildings nationwide, I recommend that the District of Columbia retain the ability for residential buildings that meet the NGBS to be deemed-to-comply with the District's Proposed Green Construction Code

I am happy to meet with you or your staff should you require a more detailed overview of ICC 700 NGBS or our certification program. I will also gladly send you any supplemental information that you might require. Please don't hesitate to contact Michelle Desiderio (mdesiderio@nahbrc.com, 301.430.6205), our Director of Green Building Programs, directly if she can be of further assistance.

I look forward to working with the Department of Consumer and Regulatory Affairs and the District Department of the Environment to promote green housing built to ICC 700 National Green Building Standard.

Best,



Michael Luzier
President and CEO

cc: Bill Updike, DDOE